

430

420

HOW
TO USE
YOUR
POLAROID
LAND
CAMERA
MODEL
430
OR
MODEL
420

WITH THIS CAMERA, USE

Polaroid Land pack film Type 108 (color)

or Type 107 (black and white)

G. E. Hi-Power flashcubes, or equivalent.

YOUR FIRST PICTURE!

To be sure that it's a success, we suggest that you make it indoors with flash, exactly as described on page 22.

BUT, BEFORE YOU START

please read this book carefully so you will know how to use the camera and where to look for any information. If you do not follow the instructions, you will not get good pictures.

The Model 430 and 420 cameras are similar in construction and operation, except:

the Model 430 has a built-in timer; the Model 420 does not;
the Model 430 has a 3-element lens that takes some accessories;

the Model 420 has a 2-element lens that does not take accessories.

Instructions in this book are for both models, although most pictures are of the 430. Both models are shown when instructions are different.

Getting Acquainted

The Model 430 camera.....	2
The Model 420 camera.....	4
How to open and close the camera.....	6
How to hold the camera.....	7
How to use the viewfinder.....	8
How to focus with the rangefinder.....	9
Know your flash unit and flashcubes.....	10
How to attach and remove the flash unit.....	11
How to insert a flashcube.....	11
The cube rotation lever.....	12
Why you must focus accurately when using flash.....	12
The controls . . . and what they do.....	14
What you should know about your film.....	16

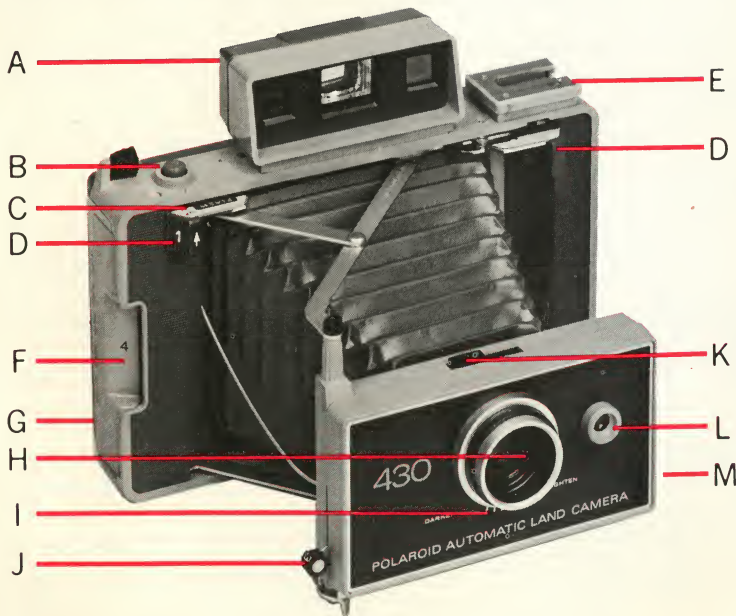
Operation

How to load a film pack.....	17
How to set the camera for flash and daylight pictures.....	20
How to make flash pictures.....	22
How to make daylight pictures.....	24
How to develop the picture.....	26
Check the temperature.....	29
If no yellow tab appears when you pull the white tab.....	30
Care of the print.....	31
How to use the Cold-Clip with color film.....	32
How to make prints lighter or darker (Non-flash).....	34
How to make prints lighter or darker (Flash).....	35
How to make black and white pictures in dim light without flash.....	36

Miscellaneous

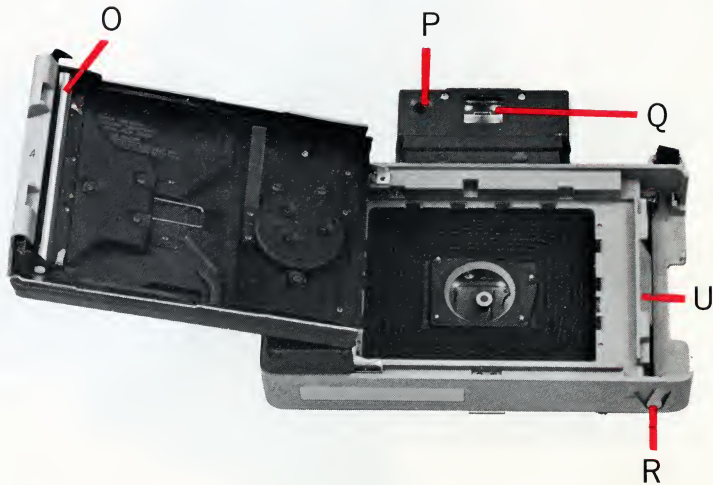
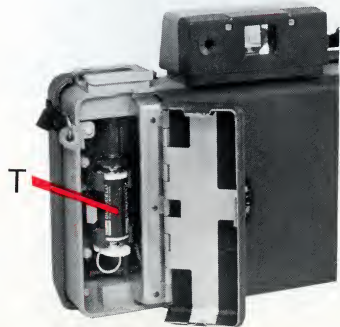
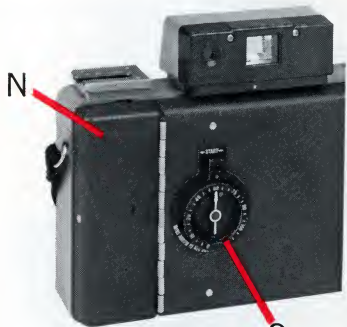
You must take care of your camera.....	38
Battery loading and replacement.....	39
Copies and enlargements.....	40
Some helpful accessories.....	41
For the Model 430, a cloud filter.....	42
If your flash pictures are too dark.....	43
Picture troubles, their cause and cure.....	44
Where to write for information.....	47
Warranty.....	47
Polaroid Service Centers and offices.....	48

THE MODEL 430 CAMERA

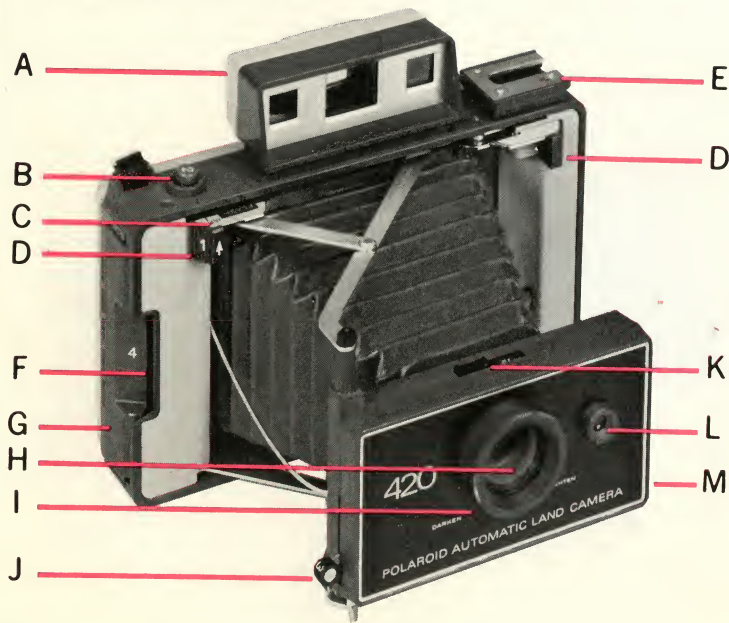


- A. View/rangefinder
- B. Shutter release
- C. Flash range indicator
- D. Rangefinder pushbutton
- E. Flash connector
- F. White tab slot
- G. Yellow tab slot door
- H. 3-element lens, 114mm., f/8.8
- I. Lighten/Darken control
- J. Shutter cocking lever
- K. Film selector
- L. Electric eye
- M. Flash outlet (flashcubes only)
- N. Battery compartment
- O. Steel rollers
- P. Focus window
- Q. View window
- R. Back door latch
- S. Timer
- T. Battery for electric eye and shutter controls
- U. Serial number

IMPORTANT: Keep rollers clean (page 38);
change battery yearly (page 39).

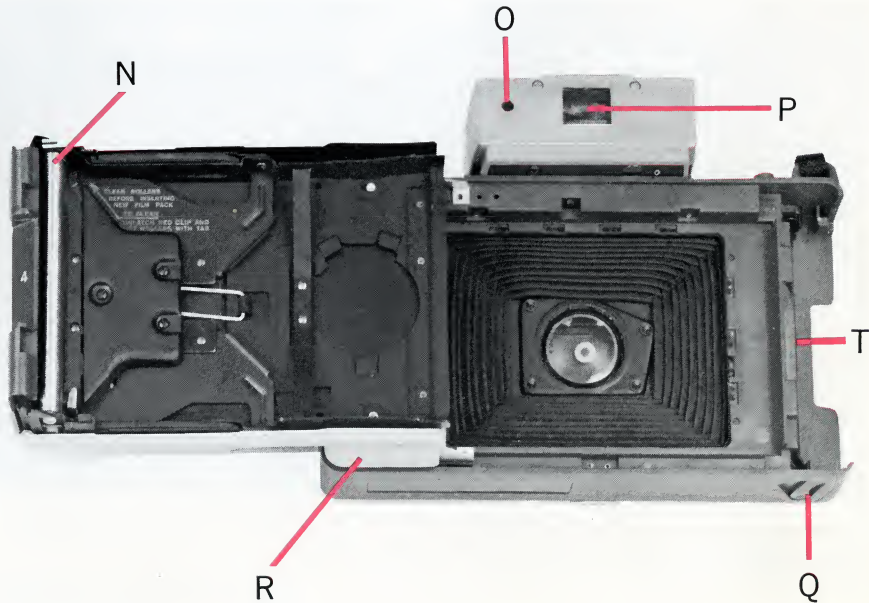
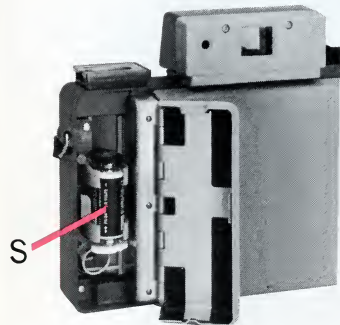


THE MODEL 420 CAMERA



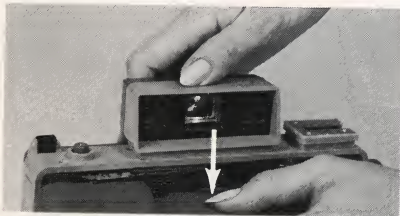
- A. View/rangefinder
- B. Shutter release
- C. Flash range indicator
- D. Rangefinder button
- E. Flash connector
- F. White tab slot
- G. Yellow tab slot door
- H. 2-element lens, 114mm., f/8.8
- I. Lighten/Darken control
- J. Shutter cocking lever
- K. Film selector
- L. Electric eye
- M. Flash outlet (flashcubes only)
- N. Steel rollers
- O. Focus window
- P. View window
- Q. Back door latch
- R. Battery compartment
- S. Battery for electric eye and shutter controls
- T. Serial number

IMPORTANT: Keep rollers clean (page 38);
change battery yearly (page 39).

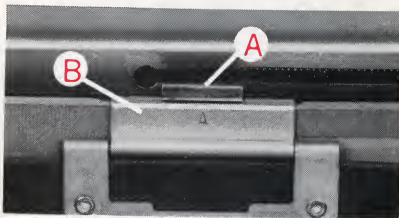


430/420

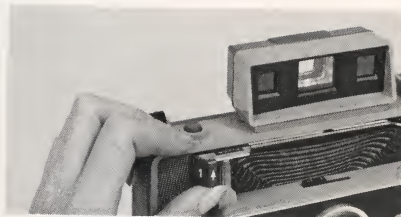
HOW TO OPEN AND CLOSE THE CAMERA



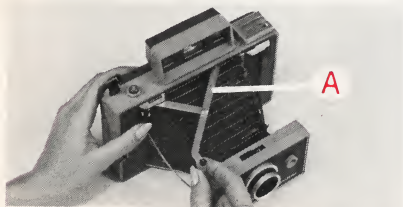
1. To unlatch cover, press on center of top. You can let cover hang down.



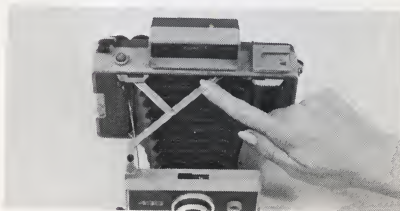
2. To remove it, push spring (A) and lift hinge (B). To replace, slide hinge down over spring.



3. Raise button No. 1; this unlocks camera front.



4. Pull camera front out as far as it will go. Be sure locking bar (A) snaps into place. If not, you may get blurred pictures.



5. To close camera, press down on locking bar and push camera front in until it locks.

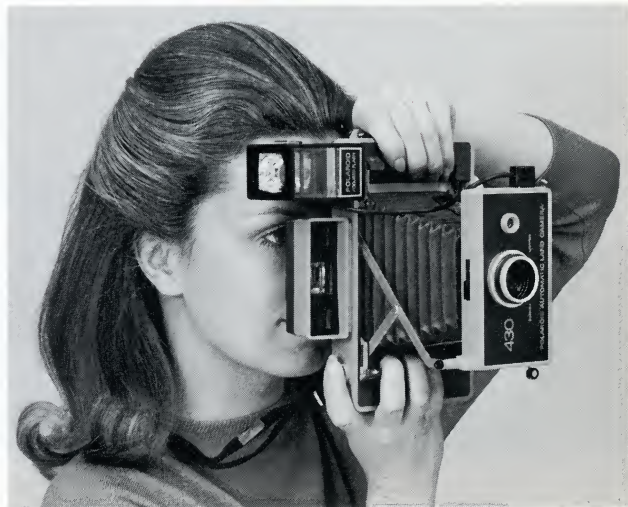
When storing the camera be sure that nothing presses on the No. 2 button; if it's depressed even slightly, the battery may be drained.

430/420

HOW TO HOLD THE CAMERA



HORIZONTAL: Grip the two ends. Place your forefingers on the No. 1 buttons; you can easily shift the right forefinger to the No. 2 button. To steady the camera, press your elbows into your ribs; rest the camera against your nose.



VERTICAL: Grip the camera as you would for a horizontal picture, turn it so your right hand is below. Brace the camera against your forehead and face.

HOW TO USE THE VIEWFINDER

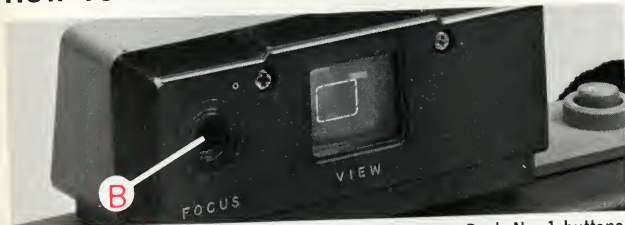


Looking through the viewfinder window (A) you'll see a bright, white broken line. Frame the scene with this line. Always try to look through the center of the window and concentrate on your subject, not on the white line. If your

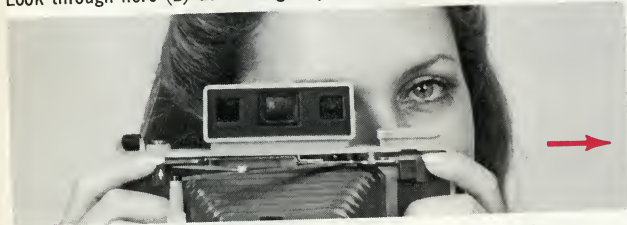


subject is very close ($3\frac{1}{2}$ ft., for example), allow a little extra space between your subject and the top frame line, as shown above. If not, you may accidentally cut off the top of someone's head in your picture.

HOW TO FOCUS WITH THE RANGEFINDER



Look through here (B) at the bright spot. ▲ ▼ Push No. 1 buttons.



Holding the camera horizontal, place your forefingers on both No. 1 buttons as shown and push them all the way to your left. Look through the FOCUS window (B) and aim the bright spot in the center at a nearby subject (about 4 ft. away, for example). You should see two images of your target in the



bright spot; this means that the camera is not focused for that distance. Push the No. 1 buttons back and forth until the two images become one — sharp and clear. Now the camera is focused. For vertical pictures, you can focus with the camera horizontal, turn it to aim and shoot.

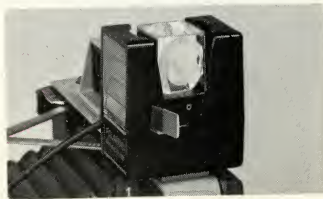
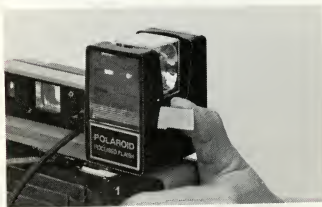
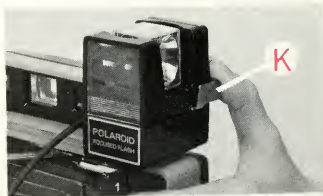
To get correct flash exposures, you must focus accurately (see page 13).

THE CUBE ROTATION LEVER

After each of the four flashes is fired, the flashcube must be rotated to the next flash position. This is done manually with the cube rotation lever (K). With the left thumb push the lever forward as far as it will go. **You must remember to push the lever, or you will not get a flash. It is a good idea to always do this just after you press the No. 3 button on the camera to reset the shutter (see page 23).**

When the lever is pushed after the fourth flash, it will not return automatically to its normal position, but will stay in the forward position. This serves as a reminder that the cube must be changed for a new one.

The lever will return to its normal position when the flashcube is pulled out.



WHY YOU MUST FOCUS ACCURATELY WHEN USING FLASH

Focusing the camera automatically adjusts the opening of the louvers in the flash unit. This assures that, between a distance of $3\frac{1}{2}$ ft. and about 10 ft. a subject which is sharply focused will also receive the right amount of light from the flashcube to give a correctly exposed picture. For example, if a subject is 8 ft. from the camera, the light output from the flash unit must be greater than it would need to be for a subject $3\frac{1}{2}$ ft. away, if both are to receive the same exposure. Thus, at 8 ft. the louvers must be wider open than at a $3\frac{1}{2}$ ft. setting.

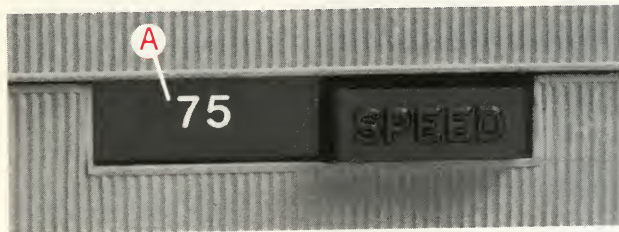
Top: CORRECT focus on subject $3\frac{1}{2}$ ft. away. The louvers opened the correct amount, to light the subject for a well exposed picture.



Bottom: INCORRECT focus. The subject distance was $3\frac{1}{2}$ ft. but the camera was focused for a greater distance. As a result the louvers were too wide open. The subject received too much light and the picture was overexposed.



THE CONTROLS . . . AND WHAT THEY DO



A. The Film Selector: It sets the camera for the kind of film you are using. For color film, set it to 75, as shown. For black and white film, slide it the other way to set it to 3000. If you don't set the Film Selector, the electric eye (B) can't make a correct exposure.



B. The electric eye: The electric eye only works for non-flash pictures; when you press No. 2 button, the shutter opens. Instantly, the electric eye measures the brightness of the light reflected from the subject and times the closing of the shutter to give correct exposure.

The electric eye does not measure flash exposures (see page 10).

C. The camera Lighten/Darken control, for pictures made without flash: Turning this L/D control adjusts the electric eye so you can make your picture lighter or darker than it would be if the L/D control were left at the Normal position (shown here). **This control has no effect on pictures made with flash.** For more details about the camera L/D control, see page 34.



D. The flash Lighten/Darken control: Turning this L/D control adjusts the amount of light coming from the flash unit so you can make a flash picture lighter or darker than it would be if the L/D control were left at the Normal position (shown here). For more details about its use, see page 35.



WHAT YOU SHOULD KNOW ABOUT YOUR FILM

This camera uses two kinds of Polaroid Land pack film: Type 107 black and white film, and Type 108 color film. There may be additional types of film in the future.

A film pack contains all the materials to make eight pictures. For each picture there is a piece of negative film, a sheet of print paper, and a thin foil container (the pod) filled with the jelly-like chemicals needed to develop the picture.

After snapping the picture, you start development by pulling a piece of paper out of the camera. This drags the exposed negative, a sheet of print paper, and a pod of chemicals between two steel rollers. The pressure of the rollers squashes the pod, spreading the chemicals between the negative

and print paper to form a picture "sandwich".

The picture develops outside the camera. After the recommended development time you separate the sandwich and there is your finished picture.

PROTECTION OF FILM AND CAMERA

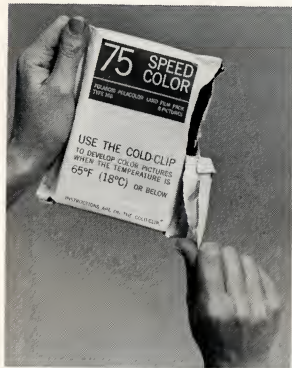
Extreme heat and high humidity can damage your film (and also your camera), especially after the film pack has been placed in the camera. Don't leave film, or a loaded camera, in direct sun or in a car during hot weather. The best storage place in a closet is near the bottom, where the air is cooler. Don't unwrap film until you are ready to use it.

CAUTION: Please be sure to read the important notice inside the back cover.



An important label: On some color film packs you may see a label (A) advising you to turn the Lighten/Darken control to a special setting for all pictures made with that pack. Please do so, or your pictures may be too dark.

HOW TO LOAD A FILM PACK



Open the top of the box. Pull out the film package. Handle it gently, carefully. Hold the package near the edges. **Don't press hard on the middle of the package.** Starting at the corner, tear open the entire side of the foil bag along the dotted line and remove the film pack. **Discard the moisture absorbing card (A) supplied with color film.** Handle the pack

A special request!

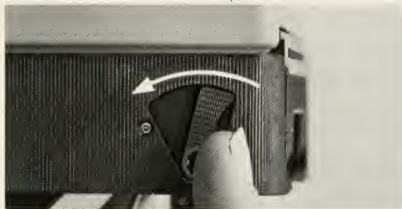
As soon as you open the film pack you will begin to accumulate waste paper. There will be more when you develop the pictures. We hope that it won't become litter in the streets or be scattered around the landscape.

What to do with the waste paper? Usually, it will fit into an empty foil bag or film box. Or, if you're planning to take lots of outdoor pictures, bring along a paper bag or other container for waste. Everyone will appreciate this little extra effort on your part.

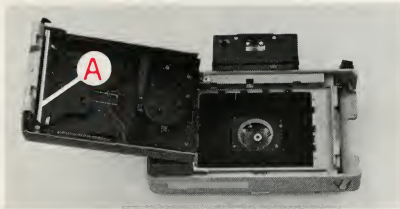
by the edges only. With color film there's a set of mounts; with black and white film there's a coater. Please read the instruction sheet. Save the box to carry prints in safely. It can also be very useful when coating black and white prints.

Always open the package and load film in the shade, not in direct sunlight, to avoid fogging the film.

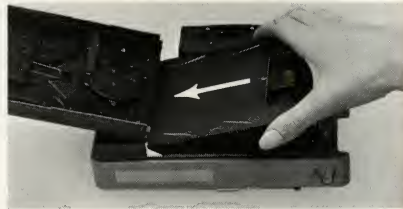
LOADING (Cont.)



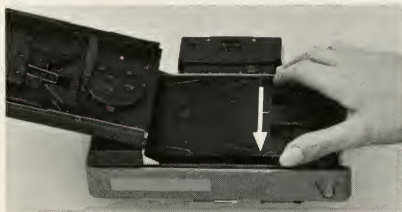
1. Push the back door latch; the door will pop up.



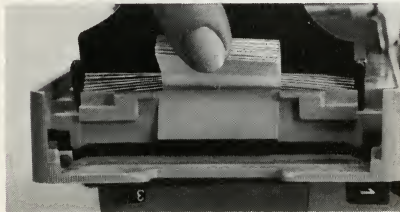
2. Open it all the way. Are the rollers (A) clean? If not, clean them as described on page 38.



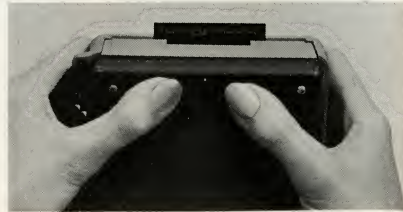
3. Hold the film pack by the edges as shown, and push the closed end of the pack under the door hinge against spring tension.



4. Push the pack down into the camera.

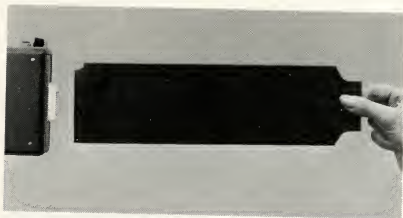


5. & 6. Check to be sure that the white tabs are not caught between the film pack and the camera body. Close the back door. Press both sides firmly to be sure that both sides latch. The black tab of the safety cover must stick out of the small slot. If not, reopen the back, lead the tab out.

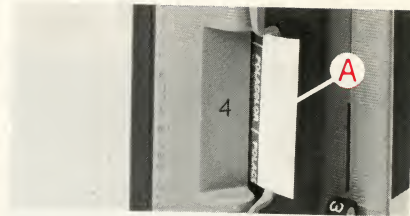




7. Grip the black tab. This is the end of the safety cover.

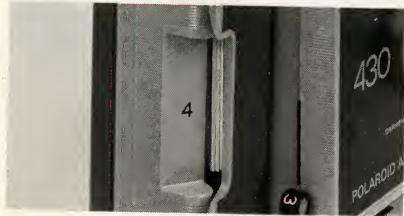


8. Pull the safety cover all the way out of the camera without stopping. Don't rip it.

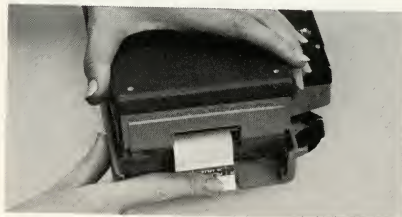


9. With the safety cover out, a white tab (A) should stick out of the small slot (No. 4). Don't pull the tab. You're now ready for picture No. 1.

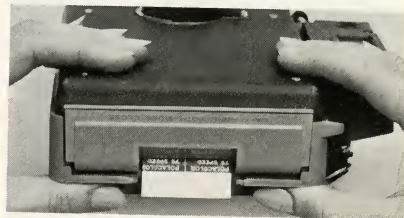
IF NO WHITE TAB APPEARS



1. If there's no white tab in the No. 4 slot, do the following in the shade or indoors, not in bright sunlight.



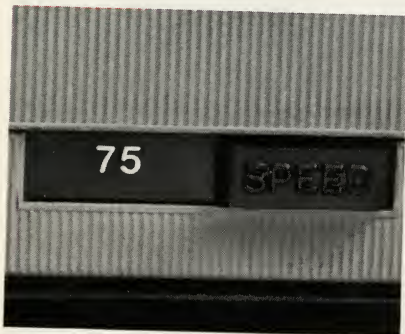
2. Open the back of the camera part way and, without disturbing or moving the film pack, push the white tab out into the open.



3. Close the back of the camera, making sure that both sides are locked securely and the white tab is outside, in the No. 4 slot.

HOW TO SET THE CAMERA FOR FLASH AND DAYLIGHT PICTURES

FOR COLOR



Film Selector: Set it to 75.



▲ For flash.

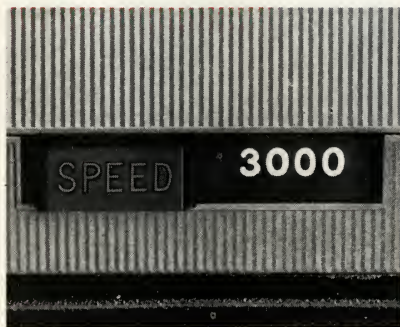
▼ For daylight.



Lighten/Darken controls: Set them to the Normal position (shown) unless a label on the back of the film pack (A) shows a special setting. You can open the back of a loaded camera to see if there is such a label. If you do this carefully in the shade or indoors and don't move the pack, the film will not be damaged.

Before you can take a picture, the No. 3 button on the camera front must be down (see pages 23 and 25).

FOR BLACK AND WHITE



Film Selector: Set it to 3000.

Before you can take a picture, the No. 3 button on the camera front must be down (see pages 23 and 25).



▲ For flash.

▼ For daylight.



Lighten/Darken controls: Leave them at the Normal position (shown) unless you want to make a picture lighter or darker.



Fast focus for action pictures: To be used only with black and white film in bright daylight. Set the camera so that the arrow on the camera is at the letter S of the word FLASH on the movable scale, as shown. In this way you will get sharp pictures from about 3 ft. to well beyond the range in which you would normally take action shots, without the need to focus with the rangefinder for each picture. This method is particularly useful when photographing sports and other lively activities in bright daylight, in the near to medium range.

Don't try to use this setting for flash pictures or with color film at any time.

HOW TO MAKE FLASH PICTURES



PLACE SUBJECT: Try to have your subject near a light colored wall or other light background.

PLACE YOURSELF: You can shoot from any distance between $3\frac{1}{2}$ and 10 ft. For the most striking pictures, get close to your subject and get a large image.

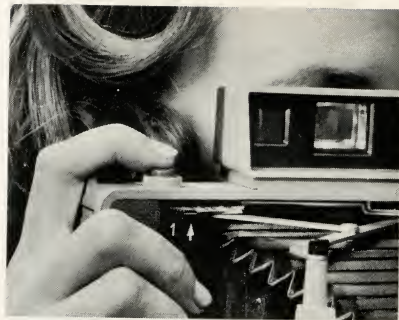
CHECK that the camera controls are set correctly (see pages 20, 21).

Be sure that a flash cube is inserted correctly in the flash unit (see page 11).



1. AIM AND FOCUS: Frame your subject in the VIEW window. Move your eye to the FOCUS window. Push the No. 1 buttons until the bright spot in the rangefinder shows a single clear image of the most important part of your subject. Then frame your subject again in the VIEW window.

Focus accurately: To get a correctly exposed flash picture you must focus correctly (see page 13).



2. SHOOT: Press button No. 2. Press it smoothly and slowly. Hold the camera quite still until you hear a loud click and the flash fires.

IMPORTANT: Before you can shoot, the No. 3 button on the camera front must be down. (See next column.)

AVOID GETTING BLURRED FLASH PICTURES by making quite sure that neither the camera nor the subject moves during the exposure.



3. RESET: Immediately after snapping a picture, press No. 3 button down firmly until it locks and stays down. This resets the shutter so you'll be ready for the next picture.

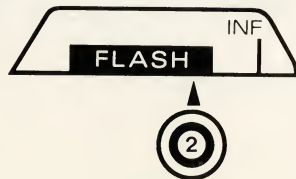


4. ADVANCE FLASH CUBE: Press the cube rotation lever forward as far as it will go, to prepare you for the next flash. See also page 12.

YOU ARE NOW READY TO DEVELOP THE PICTURE. SEE PAGE 26.

DO NOT SHOOT FLASH PICTURES FROM FURTHER THAN 10 FT.

The recommended range for good flash pictures (3½ to 10 ft.) is shown by the flash range indicator, (right). If, after focusing the camera, the arrow points at the black bar, as shown, you are within the flash range. If the arrow points beyond the bar, come closer and refocus before shooting.



430/420

FLASH PICTURE HINTS

Line up groups: Try to have everyone about the same distance from the camera so they'll be lighted evenly.

Have plenty of color: White, black, and gray don't improve color pictures.

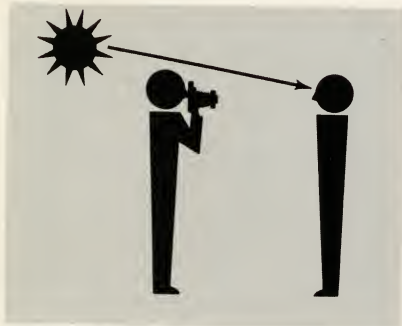
Medium sized rooms with light walls are best: In such a setting a lot of light, which would otherwise be lost, is reflected back onto the subject. The further you are from the subject, the more important it is to have such reflective surfaces nearby.

Spare the eyes: Let your subjects look elsewhere than right at the camera.

Flash don'ts: Don't try to make flash pictures in daylight. Don't shoot flash pictures in explosive atmospheres.

GET CLOSE TO YOUR SUBJECT AND GET A LARGE IMAGE.

HOW TO MAKE DAYLIGHT PICTURES



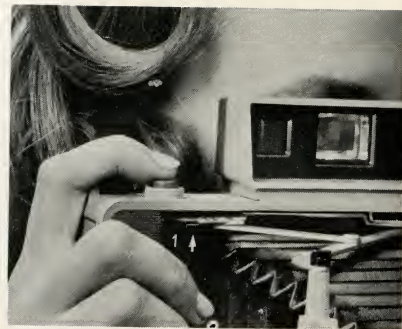
STAND so the light on the subject is coming from behind you or from the side, but not from in front of the camera.

CHECK that the Film Selector and L/D control are set for the kind of film you are using (see page 20).

BE SURE that the flash unit is not plugged into the camera. If it is, the electric eye will not function.



1. AIM AND FOCUS: Frame your subject in the VIEW window. Move your eye to the FOCUS window. Push the No. 1 buttons until the bright spot in the rangefinder shows a single clear image of the most important part of your subject. Then frame your subject again in the VIEW window.



2. SHOOT: Press button No. 2 smoothly and slowly, without moving the camera, until you hear a loud click. When shooting in the shade or in dim light, hold No. 2 down and don't move until you hear a second click as the shutter closes. Then let No. 2 button come up.

IMPORTANT: Before you can shoot, the No. 3 button on the camera front must be down. (See next column.)



3. RESET: Immediately after snapping a picture, press No. 3 button down firmly until it locks and stays down. This resets the shutter so you'll be ready for the next picture.

YOU ARE NOW READY TO DEVELOP THE PICTURE. SEE PAGE 26.

DAYLIGHT PICTURE HINTS

The best light for pictures of people: On a very bright, hazy day the light is even and the shadows are soft.

Move in close: The bigger your subject is in the print, the more color and detail you'll be able to see.

Have plenty of color: Look for subjects and backgrounds with big areas of strong, bright colors.

Watch the background: The light on it should be just about as bright as the light on the subject.

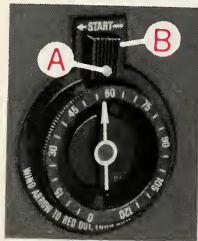
Keep an eye on the temperature: Cold or very hot weather can affect the quality of your pictures. Be sure to read page 29, which explains how temperature affects your pictures.



Lighting to avoid: Bright light behind a shaded subject will "fool" the electric eye. Your subject will be too dark.



HOW TO DEVELOP THE PICTURE



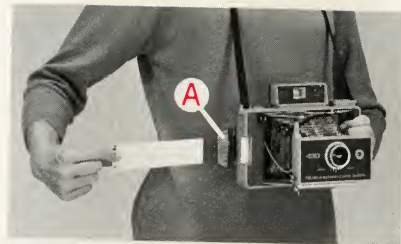
1. Set the timer:

Model 430: Wind the arrow clockwise as far as it will go, so the point stays at the dot (A). Turn the number dial to place the desired time next to the point of the arrow. To start the timer, move the START lever (B) to the left. Don't start the timer now.

Model 420: If you have a Polaroid timer, set it to the correct development time before you pull the tabs. Or, get ready with a watch.



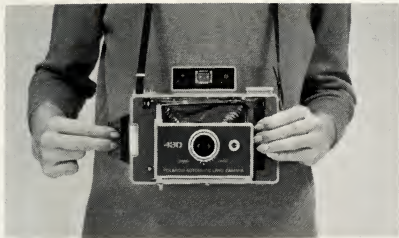
2. Hold the camera as shown: Use your left hand. Your grip should be firm but flexible. Hold the camera a few inches in front of you with your elbows close to your body. Grasp the white tab with thumb and forefinger of the right hand.



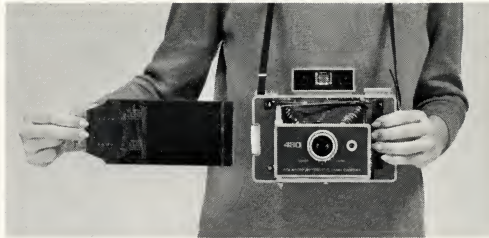
3. Pull the white tab all the way out of the camera: Pull it straight out, without stopping. A yellow tab (A) will pop out of a door in the end of the camera. Don't block this door in any way.

If no yellow tab pops out, stop: Don't pull another white tab. Instead, follow the steps shown on page 30.

Never pull a white tab if you can see a yellow tab: If you do so accidentally, stop! Follow the steps shown on page 30.

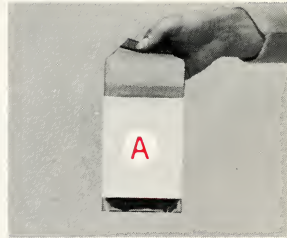


4. Grip the center of the yellow tab.



5. Pull the yellow tab all the way out of the camera: Pull straight, smoothly, at medium speed, without slowing down or stopping.

The picture is now developing outside the camera, so start the timer as soon as you get the tab all the way out.

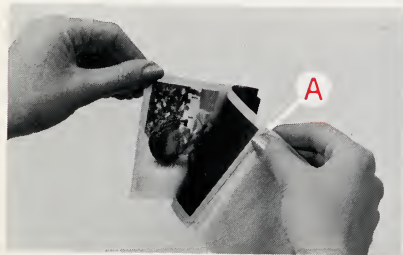


6. Wait: Develop the picture for the full time given in the film instruction sheet. Let the film hang from the yellow tab without moving, or lay it down flat.

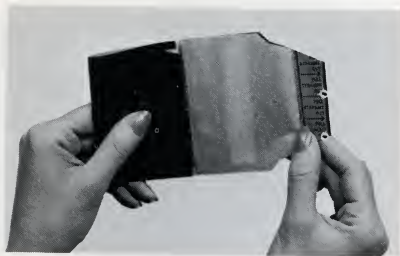
Don't touch or bend the part where the picture is developing (A).

Next page, please.

DEVELOPING (Cont.)



7. Separate the print: After the full development time, quickly lift the print away from the rest of the paper, starting from the end near the yellow tab (A). **Don't** start at the other end; you will get developer chemicals on your fingers. Don't touch the face of the print. Black and white prints must be coated and color prints should be mounted (see page 31).



8. Fold up the negative: To avoid touching chemicals left after the print is removed, fold up the negative with the moist side in. Please put it in a wastebasket.

CAUTION: Please be sure to read the important notice inside the back cover.

DEVELOPING HINTS

Time development carefully: Color pictures that are developed for too long a time will tend to have a bluish tint; if they are developed for less than the full recommended time, they will have a reddish brown tint and the colors will be of poor quality.

Black and white pictures will not be harmed by a few seconds extra development time. If they are developed for less than the recommended time they will have a muddy gray look.

Check the timer: It is designed to be sufficiently accurate for its purpose but should be checked occasionally. If it's fast or slow, allow for this when developing pictures.

Is the print too light or too dark? If so, page 34 tells you what to do.

CHECK THE TEMPERATURE! IT'S IMPORTANT

Cold and heat have a great effect on the way your picture develops and on the print quality. Even moderate cold can ruin your pictures unless you take precautions.

The important factor is the temperature of the camera and film at the time you're developing the picture.

A loaded camera carried outdoors in cold weather for half an hour gets thoroughly chilled. If you then enter a warm house and a few minutes later shoot a flash color picture the results are likely to be bad. It takes a long time for a cold camera and film to warm up.

However, if camera and film are indoors and warm, you can step outside to snap the children in the snow, step back in again in a minute and develop the picture normally.

In cool weather, development times may have to be adjusted according to the temperature. The instruction sheet with each film pack contains detailed information about development times and temperatures. Be sure to read these recommendations; they may change from time to time.

In very hot weather there is a greater tendency for chemicals to be squeezed out of the edges of the picture assembly as you pull the yellow tab to begin development. If these chemicals collect on the steel rollers they can cause defects in your prints. So, when it's hot, be extra careful to keep the rollers clean (page 38).

HOW TEMPERATURE AFFECTS COLOR FILM

The normal development times for color film are set for temperatures of 75°F (24°C) and warmer. When it's cooler the action of the developer chemicals slows down and you must develop for a longer time. See the film instruction sheet for more details.

When the temperature gets to 65°F (18°C) and below, the chemical action is so sluggish that color pictures won't develop well without help. That help is the Cold-Clip (page 32). Color pictures developed in cold weather without the Cold-Clip will be dark, with muddy colors.

As a general rule, use the Cold-Clip whenever it's too cool to be comfortable in a short-sleeved shirt.

You'll get your best colors in pictures made in pleasantly warm weather. But when it is terribly hot your prints may show weak colors and have a pinkish tint overall.

HOW TEMPERATURE AFFECTS BLACK AND WHITE FILM

The normal development times are set for temperatures of 70°F (21°C) and above. **As a rule, if it's too cool to be comfortable in a short-sleeved shirt, develop pictures for a longer-than-normal time.** Time and temperature recommendations may change; see your film instructions for details. **Don't use the Cold-Clip with black and white film.**

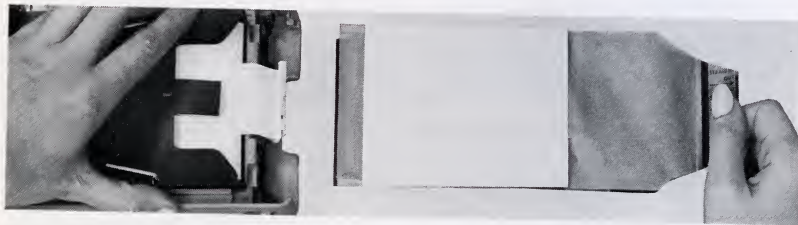
IF NO YELLOW TAB APPEARS WHEN YOU PULL THE WHITE TAB



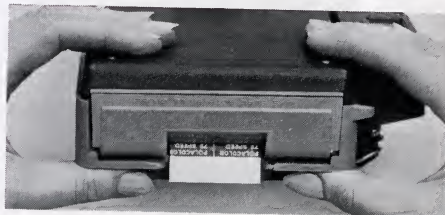
Don't pull another white tab. Instead, gently open the camera back just enough to get a fingertip or a pencil under it to hold down the film pack. Do this indoors or in the shade.



While holding the pack down lightly (picture at left) slowly open the back all the way and take hold of the topmost yellow tab, as shown.



Gently pull the entire picture assembly all the way out of the pack and discard it. Don't try to save it. While the back door is open check that the rollers are clean (page 38).



Close the back of the camera, making sure that the next white tab sticks out of the small slot next to No. 4. Check that both sides of the back latch securely.

CARE OF THE PRINT



CARE OF BLACK AND WHITE PRINTS

Pictures made with Type 107 film must be coated, within two hours if possible, to protect them from fading, scratches, etc. A coater is supplied in each film package. To coat a print, lay it face up on a clean, smooth surface and hold down one edge.

Remove the coater from the tube. Hold it by the plastic handle and run the liquid-soaked side down the length

of the picture, away from you. Use 6 to 8 overlapping strokes and moderate pressure. Cover the **entire** print, including the borders. Don't scratch the print with the edge of the coater. To get more liquid from a partly used coater, press it down on the near end of the print, then spread the squeezed-out liquid across the picture.

The coating dries quickly and forms a tough protective layer over the image. Don't bend or crease coated pictures, and don't write on the back with a ball-point pen or a sharp pencil; the coating may crack and cause discoloration in the print. When you write on the backs of prints, use a soft pencil and write lightly, and only in the areas around the edges. Keep freshly coated prints apart, or they will stick together.

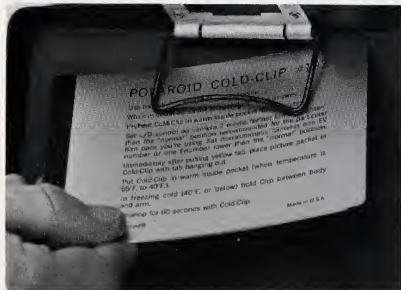
Don't use corner mounts, paste, glue, or rubber cement to mount pictures. Many adhesives contain impurities that discolor pictures. Never put your pictures in albums with black paper leaves; use Polaroid Picture Albums.

CARE OF COLOR PRINTS

A newly separated color print will look nearly dry, but don't touch it for a few minutes until the surface dries hard and glossy. To protect it against curling, cracking, etc., mount it on one of the print mounts supplied with the film. **Do not coat color prints.**

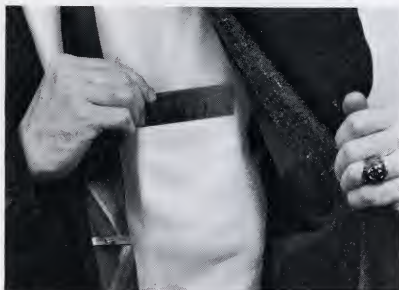
The dyes used to form colors in the prints are long lasting. However, like all dyes, they will fade if exposed to bright light for long periods of time. For maximum protection and easy access, store prints in Polaroid Picture Albums.

HOW TO USE THE COLD-CLIP WITH COLOR FILM



The Cold-Clip makes it possible to get good color pictures when the temperature of the camera and film is 65°F (18°C) or below at the time the picture is developed.

If you are unsure of the temperature, use the Cold-Clip anyway. It may improve the color of your pictures and it can do no harm even if the temperature is above 65°F. Store the Cold-Clip in the camera cover when it is not in use, so it will always be handy when needed.



1. Warm up the Cold-Clip: Take it out of the camera cover and warm it with body heat in an inside pocket or between your arm and body for about five minutes **before** starting to take pictures.



When temperature is 65°-55°F (18°-13°C) ▲

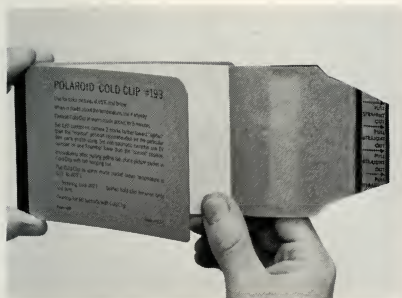
When temperature is below 55°F (13°C) ▼



2. Set the L/D control and shoot: When it's cool enough to use the Cold-Clip, set the L/D control as shown before taking the picture. Use the camera L/D control for daylight pictures and the flash L/D control for flash pictures.

If the Normal position of the L/D control for that film pack already is one mark toward LIGHTEN, turn the L/D control one or two more marks toward LIGHTEN, according to the temperature.

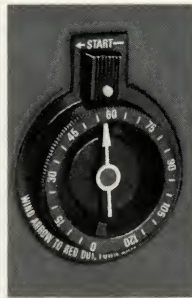
These recommendations may change, from time to time. For the latest information, check the film instructions.



3. Start development: Pull the yellow tab all the way out of the camera and immediately place the picture "sandwich" inside the Cold-Clip with the tab hanging out. Do this within 10 seconds after pulling the yellow tab.



4. Keep the Cold-Clip and film warm: Put the Cold-Clip between your body and arm while the picture develops.



5. Time development: Let the picture develop for 60 seconds inside the Cold-Clip, then remove the "sandwich" and separate the picture in the usual way.

Occasionally, developer may leak from the edges of the developing picture and stick to the Cold-Clip. Avoid contact with this material and before using the Cold-Clip again clean it with a damp cloth. **Be sure to read the CAUTION notice inside the back cover.**

Don't use the Cold-Clip for black and white pictures.

HOW TO MAKE PRINTS LIGHTER OR DARKER

Non-flash



This is well exposed. . . leave the L/D control here.



If it's too light . . . set the L/D control here.



If it's too dark . . . set the L/D control here.



Most pictures made with the light coming from behind you or from the side will be well exposed with the Lighten/Darken control at Normal position (left, above), but sometimes you may prefer a lighter or darker print. To lighten or darken the next print of the same subject, in the same lighting conditions, adjust the L/D control as shown. To make a small

change, turn only to the first small mark. **If there is a label on the film pack showing a special setting of the L/D control**, set the control as shown there and make that the Normal position for all pictures made with that pack. Any adjustment of the L/D control should be in addition to that special setting.

Flash

When you are taking flash pictures, the camera L/D control will not be in operation. It is a good idea to leave it set at its Normal position. Flash pictures can be lightened or darkened in a similar manner by using the flash L/D control, which is situated on the rear of the flash unit.

If the main subject in your flash picture is too light or too dark by about the amount shown in the center and right picture on the opposite page, then move the flash L/D control **all the way** toward either Lighten or Darken respectively.

If there is a label on a color film pack indicating that the camera L/D control should be set toward Lighten by one mark: When using flash, set the **flash L/D control** toward Lighten by one mark instead.



HOW TO MAKE BLACK AND WHITE PICTURES IN DIM LIGHT WITHOUT FLASH

With black and white film you can shoot pictures without flash in the shade or on a dark, cloudy day. If there's plenty of window light coming from behind the camera you can even make pictures indoors, such as the big one opposite.

Set the Film Selector of the camera to 3000 and the camera L/D control at Normal. If the first picture is too light or too dark, adjust the L/D control accordingly.

Provided that the light on the subject is even and there are no deep shadows or bright lights in the scene, the electric eye can make a long but correct time exposure — it may be 1/10 sec. or even a full second. The camera must be rock-steady or pictures will be blurred.

Hold No. 2 button down and don't move until you hear the second click as the shutter closes. Then you can move and let No. 2 button up.

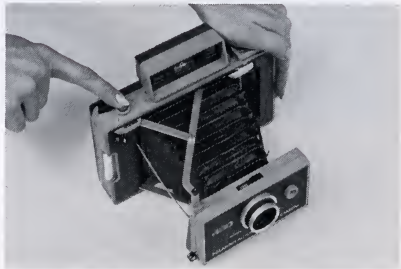
This kind of lighting is not recommended for color pictures, unless you are trying for special effects.



Lighting to avoid: Bright light in the scene will "fool" the electric eye and make your subject too dark.



How to hold steady: Rest your elbows on a firm support. Or, place the camera on a table top, car hood, etc.



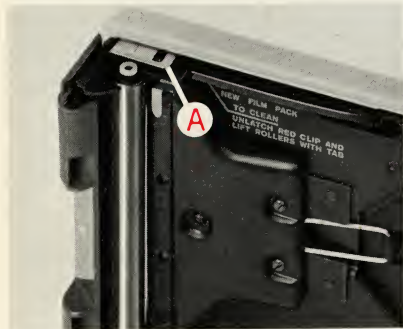


430/420

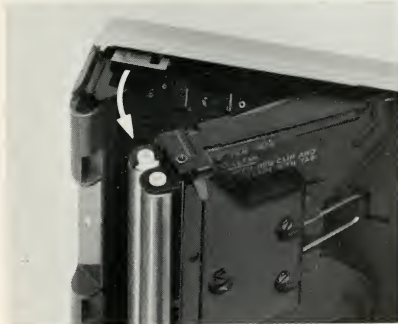


You can make a silhouette: Place a subject between the camera and a bright window and you get this result.

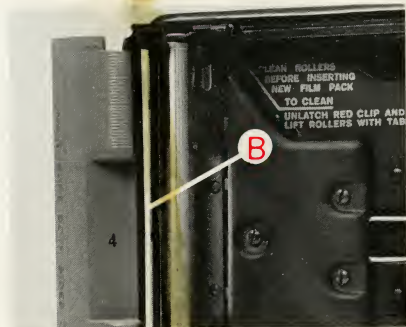
YOU MUST TAKE CARE OF YOUR CAMERA



KEEP THE ROLLERS CLEAN: Signs that they need cleaning are (1) a yellow tab does not pop out when a white tab is pulled; (2) developer chemicals are smeared on the back of a picture; (3) there are repeated spots on the face of the print. Inspect the rollers frequently; if possible, do it before



loading each new film pack. Lift up the red latch (A). Swing out the rollers; turn and inspect them, especially at the ends. Wipe the rollers clean with a damp cloth, dry them. Never scrape them with anything metallic, nor with your fingernail. Open the tab slot door; clean out any dirt around the tab slot



(B). Blow out lint or dust in the back of the camera. Push the roller assembly back into place.

CLEAN THE LENS GENTLY: Never use silicone coated eyeglass tissue. Blow dust off or brush it off lightly. Breathe gently on the lens to moisten it, wipe lightly with clean, dry, absorbent cotton. Also clean the lens over the electric eye.

BATTERY LOADING AND REPLACEMENT

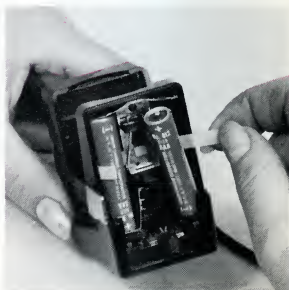
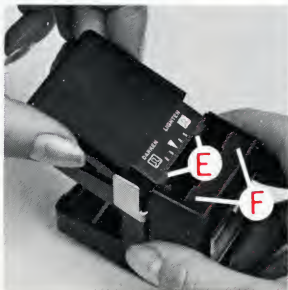
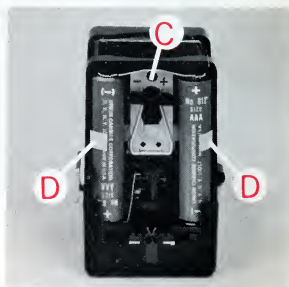
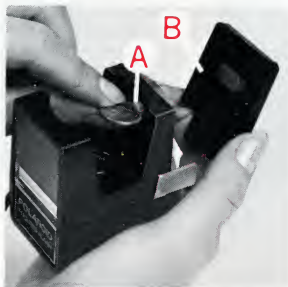
HOW TO LOAD FLASH BATTERIES: With a coin rotate the slotted screw (A) in the flash unit through a quarter turn. This unlocks the back. Lift it off (B). Insert the two batteries supplied with your flash unit. Be sure they are correctly positioned, as indicated at (C). The two tapes (D) should lie as shown. They are there to help you pull out the batteries, when you must change them (lower right picture). Replace the back, making sure the two extensions (E) slide in under the ledges (F). Press the back firmly onto the unit. Lock it on by rotating the slotted screw again through a quarter turn.

REPLACE CAMERA AND FLASH BATTERIES EVERY YEAR:

The battery compartment in the camera contains one battery (see p. 3, 5), which powers the electric eye and shutter controls. If you get all-black prints, the battery may be weak and may need replacement. Replace it at least yearly. Pry open the compartment door and install a new battery of the same or equivalent type in the same position as the old one.

Also at least once each year, install new flash batteries of the same or equivalent type in the same positions as the old ones.

See your Polaroid Land camera dealer for batteries.



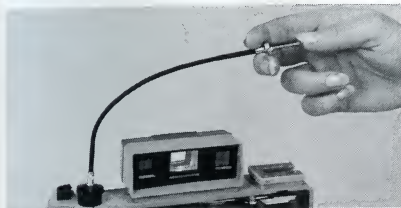
COPIES AND ENLARGEMENTS

It's easy to get copies and enlargements, both in color and black and white. If there is an order form packed with your film or camera, use it to order copies. If you don't have an order form, ask your dealer for information, or write to the nearest Polaroid office listed in the back of this book.

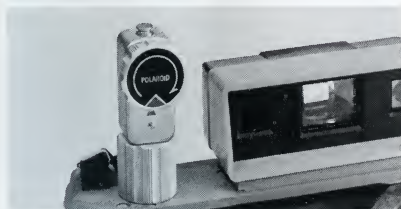
The reproductions are sharp, clear, and remarkably faithful to your original Polaroid picture. In addition to copies, beautiful mounted enlargements can also be made in various sizes. They make handsome gifts for birthdays or anniversaries. Service is prompt and convenient, and the cost is moderate.



SOME HELPFUL ACCESSORIES



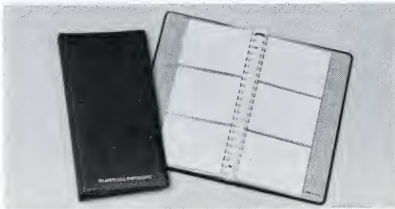
Cable release #191, with plastic adapter, fits over No. 2 button. Great for time exposures.



Self-timer #192 fits over No. 2 button, lets you get into your own pictures.



Cases #324, #325 (rear) and #476, #477 hold camera, extra film, flash unit, cubes, etc.



Albums #523 to #527 (as above, in different colors) hold 48 prints each; #519 holds 72 prints; bigger Deluxe #521 has expandable metal binder.



Model 430 only: UV Filter #585 for outdoor color pictures.



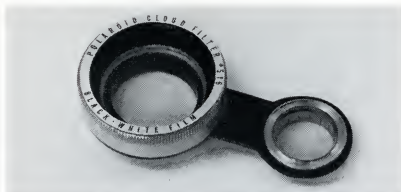
Model 420 only: Development Timer #128 fits on camera strap.

These simple accessories can add much to your picture taking pleasure. See your Polaroid camera dealer.

FOR THE MODEL 430, A CLOUD FILTER



Without the filter.



Press the filter on over the lens mount (collapsing the lens hood) and the electric eye.



With the filter.

Black and white scenic pictures are often disappointing because bright blue skies and fleecy white clouds come out as a dull white area in the print. The Polaroid Cloud Filter #516 darkens clear blue skies, makes white clouds stand out. The darkened skies also make contrasting backgrounds for

light colored subjects on the ground. The #516 filter has no effect on gray skies, in the fog or rain, or at night. Don't use it with color film at any time. With the filter in place, set the L/D control to Normal position. If your print comes out too light or too dark, adjust the L/D control as shown on page 34.

IF YOUR FLASH PICTURES ARE TOO DARK



If you get a picture which is too dark, read this page carefully to find out why, and make the needed correction before taking more flash pictures.

WHY THE PICTURE MAY BE TOO DARK

1. Distance from camera to main subject more than 10 ft.: Normally you should not take flash pictures of a subject more than 10 ft. from the camera.

2. One of the three basic camera settings is wrong: They are
Film Selector (see p. 14)
Lighten/Darken control (see p. 35)
Camera focus (see p. 9)

3. People in a group are at different distances: In group pictures, one or more persons may be too far from the

distance for which the camera is focused. Place your subjects so they are all about the same distance (the focused distance) from the camera.

4. The subject is very dark and absorbs light: Example — black dog or cat. Come as close as possible and turn flash L/D control toward LIGHTEN.

5. Background is dark or too far behind subject: Place subject nearer background. With dark background, move as close to the subject as you can.

6. No nearby light colored walls and ceiling to reflect light: Avoid flash pictures in auditoriums, churches, large rooms, unless you can place the subject near a light background. Stay well within the maximum 10 ft. range.

7. Outdoors at night: Same as 6, above.

Flash gives best results in medium sized room with light walls and ceiling.

PICTURE TROUBLES, THEIR CAUSE AND CURE

BLACK, FAINT IMAGE OR NONE

If no details are visible, no light reached the film. Perhaps you didn't reset No. 3 button. **When using flash, you may have forgotten to advance the flash cube.** Or you put into the camera the moisture absorbing card packed with color film. Or the battery is dead. Or the shutter is damaged. If a color print shows faint details, the Film Selector probably was set to 3000. Reset it to 75.

Press the cube rotation lever after each flash picture (see page 12).

WHITE, FAINT IMAGE OR NONE

The film was greatly overexposed or light-struck. If it happens with black and white film, the Film Speed Dial was probably set to 75. Any film will be light-struck if you pull out the safety cover before putting the film in the camera or if you remove a film pack from the camera after pulling the safety cover.



TOO LIGHT: FLASH PICTURES

Overexposed, with two probable causes:

1. You didn't focus accurately with the rangefinder (see page 13).
2. The flash L/D control was set incorrectly. Set it to Normal position unless there is a special setting shown on the film pack, in which case set it as shown there. If that's where it was to begin with, turn it toward DARKEN.

Daylight pictures will be badly exposed if the flash unit is plugged in. Check that the flash unit is not plugged in when making daylight pictures.



TOO DARK: NON-FLASH PICTURES

Underexposed, probably because the camera L/D control was set incorrectly. For most pictures, set it to Normal position unless there is a special setting shown on the film pack, in which case set it as shown there. If that's where it was to begin with, turn the L/D control toward LIGHTEN.



TOO LIGHT: NON-FLASH PICTURES

Overexposed, probably because the camera L/D control was set incorrectly. For most pictures, set it to Normal position unless there is a special setting shown on the film pack, in which case set it as shown there. If that's where it was to begin with, turn the L/D control toward DARKEN.



REPEATED SPOTS

Usually they are white, but they may be reddish-orange on color pictures. Marks like these show that the steel rollers are dirty. Inspect and clean them frequently (page 38).



MANY WHITE SPECKS

They are a sign that you pulled the yellow tab too swiftly; slow down a bit. Sometimes, white specks may appear only at one side of the picture. The cause is the same.

PICTURE TROUBLES (Cont.)



MUDDY LOOKING PRINT

It wasn't developed long enough. Develop both black and white and color prints for the full time recommended in the film instruction sheet. This is most important in cool or cold weather. See page 32 for details of how to use the Cold-Clip with color prints. If you don't develop long enough, color prints will be brownish pink over-all; black and whites will be muddy gray.



UNDEVELOPED EDGES OR CORNERS

Usually caused by pulling the yellow tab out at an angle. When this happens the developer is not spread evenly over the picture and edges and corners may not develop.

Pulling the yellow tab out at an angle can also cause reddish-orange marks along the edge and/or in the corners of a color print. Pull the yellow tab out straight and at medium speed, all the way (pages 26, 27).



OBLONG IN PRINT

The oblong is pink or red in a color picture. You didn't pull the white tab all the way out of the camera. As a result, when you pulled the yellow tab, the white tab was dragged back into the camera and spoiled the picture.

Always pull the white tab right out of the camera (page 26).

TO OBTAIN INFORMATION AND HELP

If you ever have a problem with the camera or film, or if you don't know whether or not a repair is needed, we urge you to seek help promptly to avoid film waste and disappointment. See your dealer or write to the nearest Polaroid office (list on page 48), or to Customer Service, Polaroid Corporation, Cambridge, Mass. 02139. **Or, call Customer Service toll-free at 800-225-1384 from anywhere in the U.S.A. except Massachusetts. From within Massachusetts, and from Canada, call collect at (617) 864-4568.** When writing, send sample pictures and, most important, state what camera model you have. Please be sure to include a clearly printed return address.

WARRANTY

If this camera proves defective within one year of original purchase date, we will, at our option, repair or replace it free. We will make no charges for labor, "service" and parts, and incoming insured parcel post mailing costs will be refunded. We will also replace one pack of film to cover any pictures spoiled before the defect was identified.

The warranty does not cover damage caused by accident, misuse, or tampering with the camera. A charge will be made for such repairs.

To take advantage of the above warranty, the camera must be returned to and repaired by a Polaroid Service Center (list on page 48) or an Authorized Independent Repair Station (list available on request). For return instructions, see right.

TO RETURN A CAMERA FOR REPAIR

Please contact Customer Service (see left for details) **before** you ship the camera in for repairs. Picture problems are more often caused by incorrect use of the camera, than by a defective camera. With a little advice, you may be able to use your camera again right away, without repair.

To return your camera for repair, you may either ask your dealer to handle the return for you or you may mail the camera yourself. Pack it carefully (if you request it, we will send you a preaddressed shipping carton) to assure safe travel and send it by insured parcel post mail. Address it to the nearest Polaroid Service Center. (See list on page 48 for Polaroid Service Center addresses and for information about Authorized Independent Repair Stations.) If the camera is repaired under warranty, we will refund parcel post insured mailing costs when we ship back the repaired camera.

Whichever method you select, be sure to include a note describing the nature of the problem or sample pictures which illustrate it. If the problem concerns an accessory, such as a flash unit, include it with the camera.

If you are near a Service Center, it may be more convenient for you to bring the camera in, instead of mailing it.

POLAROID SERVICE CENTERS AND OFFICES

CALIFORNIA

Polaroid Corp.
875 Stanton Road
Burlingame 94010

Polaroid Corp.
2040 E. Maple Avenue
El Segundo 90245

GEORGIA

Polaroid Corp.
3720 Browns Mill Road, S.E.
Atlanta 30315

ILLINOIS

Polaroid Corp.
2020 Swift Drive
Oak Brook 60521

MASSACHUSETTS

Polaroid Corp.
89 Second Avenue
Waltham 02154

NEW JERSEY

Polaroid Corp.
P. O. Box 607
W-95 Century Road
Paramus 07652

OHIO

Polaroid Corp.
4640 Manufacturing Road
Cleveland 44135

TEXAS

Polaroid Corp.
9029 Governors Row
Dallas 75247

PUERTO RICO

Polaroid of Puerto Rico, Inc.
Charlyn Industrial Park
Road 190, Km 1.7
Carolina 00630

Mailing address:
P. O. Box 2032, Ceramica Annex
Carolina 00630

AUSTRALIA

Polaroid Australia Pty. Ltd.
2 Smail Street
Ultimo, N.S.W. 2007

Mailing address:
P. O. Box 335
Broadway, N.S.W. 2007

AUSTRIA

Polaroid GmbH
Kegelgasse 27
A-1035 Wien 3

BELGIUM

Polaroid (Belgium) S.A.
12-16 rue de la Victoire
1060 Bruxelles

CANADA

Polaroid Corp. of Canada, Ltd.
350 Carlingview Drive
Rexdale, Ontario

DENMARK

Polaroid A/S
Blokken 38
3460 Birkerød

FRANCE

Polaroid (France) S.A.
57, rue de Villiers
92-Neuilly sur Seine

Service Center
61, rue Chaptal
92-Levallois

GERMANY

Polaroid GmbH
Königslacher Strasse 15-21
6 Frankfurt/Main-Niederrad 1

GREAT BRITAIN

Polaroid (U.K.) Ltd.
Office, Rosanne House
Welwyn Garden City
Hertfordshire

Service Center
Huggins Lane
Welham Green, near Hatfield
Hertfordshire

ITALY

Polaroid (Italia) S.p.A.
Viale Certosa 222
20156 Milano

JAPAN

Nippon Polaroid Kabushiki Kaisha
Mori Bldg. No. 6
32, Nishikubo Tomoe-cho
Shiba, Minato-ku
Tokyo

MEXICO

Michelmex S.A.*
Apartado Postal #6-952
Mexico 6 D.F.

THE NETHERLANDS

Polaroid (Europa) B. V.
Verkoopkantoor Nederland
Office, Maassluisstraat 258
P. O. Box 9167
Amsterdam-W. III

Service Center
Markt 24
Enschede

NORWAY

Polaroid (Norge) A/S
Hvamkryssset
Boks 35
2007 Kjeller

SOUTH AFRICA

Frank & Hirsch (Pty.) Ltd.*
P. O. Box 1803
Bree and Nugget Streets
Johannesburg

SWEDEN

Polaroid AB
Box 20
S-127 21 Skärholmen

SWITZERLAND

Polaroid A. G.
Hardturmstrasse 175
Zürich 8037

*Authorized Independent Repair Station

Additional Repair Stations: Besides Polaroid's own Service Centers listed here, there are several Authorized Independent Repair Stations in the U.S.A. and Canada. To locate the one closest to you, write to the nearest Polaroid Service Center or to Customer Service, Polaroid Corporation, Cambridge, Mass. 02139, or call Customer Service toll-free at 800-225-1384 from anywhere in the U.S.A. except Massachusetts. From within Massachusetts, and from Canada, you may call collect at (617) 864-4568.

CAUTION: The Polaroid Land process uses a caustic jelly which is safely packed inside sealed containers within the metal-plastic pack. **If accidentally you should get some of this jelly on your skin, wipe it off immediately.** To avoid an alkali burn, wash the area with plenty of water as soon as possible. **It is particularly important to keep the jelly away from eyes and mouth.** Keep discarded materials out of reach of children and animals, and out of contact with clothing and furniture, as discarded materials still contain some jelly.

"Polaroid" is a registered trademark of Polaroid Corporation, Cambridge, Mass., U.S.A. "Polaroid" ®
P689H 1/73 Printed in U.S.A. on recycled paper.

Please don't litter the landscape...
Someone else may want to take a picture of it.